

INFORMATION SHEET

ORDER NO. R5-2008-_____

J.G. BOSWELL

CORCORAN TOMATO PROCESSING FACILITY

KINGS COUNTY

Background

J.G. Boswell Company (Discharger), a California corporation, is constructing a tomato processing facility south of Corcoran, in Kings County. The Corcoran tomato processing facility (Facility) will process tomatoes for tomato paste and proposes an average daily flow of about 1.4 million gallons per day (mgd) during the processing season (July through October). The facility formerly contained an onion processing facility operated by the Discharger.

The Discharger submitted a Report of Waste Discharge (RWD) dated 5 April 2007, in support of the proposed discharge to land. Tomatoes will arrive at the Facility in trucks, weighed, and graded. Tomatoes will be unloaded and initially rinsed with an evaporate water, then rinsed twice with clean well water before sorting the tomatoes. The tomatoes will be delivered to the choppers for processing and to mix tanks for further processing. The Facility will operate nearly 24 hours a day 7 days a week during the processing season which typically runs from late June through the third week of October.

Wastewater will be temporarily contained at the Facility in a sump, and then pumped to a holding pond on the adjacent Use Area. Wastewater will be blended with irrigation water in the holding pond at a minimum of a 1:1 ratio freshwater to wastewater. The blended wastewater will then be applied to the 540-acre Use Area using a Center Pivot Sprinkler irrigation system. The 540-acre Use Area will be divided into quadrants and each quadrant will have a center pivot sprinkler system.

The Center Pivot sprinklers will apply wastewater at a rate of about 0.5 inch per day and each system will take about 24 hours to complete one cycle. The wastewater will be applied followed by a minimum of 24 hours of drying, then another day of 0.5 inch application, followed again by a day to dry, etc. The resulting application is 45 inches annually.

The Discharger reports that nitrogen will be applied to the soil at a rate of about 57 pounds per acre per year (lb/ac/yr) and plans to grow primarily alfalfa and Sudan grass. The crops will require supplemental nitrogen fertilizer to maintain them.

Given the estimated flow rate of 1.4 mgd and an average BOD concentration of 247 mg/L, the Discharger indicates the maximum BOD loading rate for any day is 13 lbs/acre/day with an average BOD loading rate of 8 lbs/acre/day. These rates are well below the USEPA recommended rate of 100 lbs/acre/day.

Solids Disposal

Tomatoes unsuitable for processing will then be removed and diverted as cattle feed. Seeds and peels will be separated and diverted to the cattle feed line. The Discharger estimates about 114 tons of these solids are generated per day. Solids in the waste stream will settle out when they reach the holding pond. After the processing season, the sediment will be removed from the pond and land applied as fertilizer outside of the center pivot irrigation

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system area. The Discharger estimates they will generate about 1,000 cubic yards of sediment annually from the holding pond.

Groundwater Conditions

The Facility and Use Area are located on the fringe of the former Tulare Lake. Regionally, an upper unconfined aquifer is separated from a lower confined aquifer by an extensive clay layer (Corcoran Clay). Supply wells draw water from below the Corcoran Clay and water quality is generally good. Shallow or first encountered groundwater is of poor quality. Depth to first encountered groundwater under natural conditions is about three feet bgs. However, the Use Area is underlain with subsurface drains (tile drains), which keeps the depth to water below 5 feet bgs. Available data indicates the top of the Corcoran Clay is about 600 feet bgs and is approximately 80 to 100 feet thick beneath the area.

Groundwater quality of the lower confined aquifer is typically of excellent quality (EC concentrations between 250 and 500 umhos/cm) and provides the majority of water for domestic purposes in the area.

The shallow or perched aquifer is of poor water quality. The Discharger collected five groundwater samples from soil borings advanced within the Use Area in 2006 before discharging tomato wastewater to the property. EC concentrations ranged from about 1050 umhos/cm to 7,750 umhos/cm. Nitrate as nitrogen concentrations ranged from 6.3 to 57.9 milligrams per liter (mg/L). Sulfate concentrations ranged from about 330 to 1,900 mg/L. All EC, chloride, sulfate, and TDS concentrations exceed primary or secondary maximum contaminant levels. The wastewater has EC concentrations that are two to ten times less than the lowest levels reported for the shallow groundwater indicating the wastewater will not degrade water quality with respect to these constituents.

Compliance History

The facility is proposed; hence, there is no compliance history. The Discharger operates the Rio Bravo Tomato processing facility in Kern County. Rio Bravo files were reviewed and no significant violations were observed. Rio Bravo operates using Interim Monitoring Program Order No. 5-00-827 and appears to be compliant with effluent limitations.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The Basin Plan indicates the greatest long-term problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Regional Water Board encourages proactive management of waste streams by dischargers to control addition of salt through use, and has established an incremental EC limitation of 500 μ mhos/cm as a measure of the maximum permissible addition of salt constituents through use.

Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000 μ mhos/cm, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

Antidegradation

The antidegradation directives of State Water Board Resolution No. 68-16 (Resolution 68-16), "Statement of Policy With Respect to Maintaining High Quality Waters in California," or "Antidegradation Policy" require that waters of the State that are better in quality than established water quality objectives be maintained "consistent with the maximum benefit to the people of the State." Waters can be of high quality for some constituents or beneficial uses and not others. Policy and procedures for complying with this directive are set forth in the basin plan.

The receiving water is not of high quality as it contains naturally occurring waste constituents in concentrations that exceed water quality objectives. All EC, TDS, and sulfate concentrations observed in shallow groundwater are greater than the estimated effluent concentration.

Treatment Technology and Control

The Facility will provide treatment and control of the discharge that incorporates:

- a. Removal of solids at the plant before discharge to the Use Area. Solids will be hauled offsite and used as cattle feed or land applied as fertilizer;
- b. Application of wastewater lower than plant uptake rates for nitrogen and low organic loading;
- c. Application of wastewater at rates that will not allow wastewater to stand for more than 48 hours;
- d. Blending of wastewater with freshwater to meet the agronomic requirements for crop growth; and
- e. At least daily inspection of the Use Area during times of discharge.

Title 27

Title 27, CCR, section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Title 27 Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards provided the Regional Water Board has issued waste discharge requirements or waived such issuance; the discharge is in compliance with the Basin Plan; and the waste need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

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Accordingly, the discharge of effluent and the operation of treatment or storage facilities associated with a food processing facility can be allowed without requiring compliance with Title 27, provided the resulting degradation of groundwater is in accordance with the Basin Plan.

CEQA

The Kings County Planning Commission adopted Resolution No. 06-11 on 11 September 2006. The Resolution approved an Initial Study and adopted a Negative Declaration for the construction of the Corcoran Tomato Processing Facility and the discharge/recycling of wastewater to the approximately 540-acre disposal area. Regional Water Board staff reviewed the Initial Study and provided comments to the Discharger regarding the lining of the storage pond on the Use Area property.

Proposed Order Terms and Conditions

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions

The proposed Order prohibits discharge to surface waters and water drainage courses.

The proposed Order would approve the proposed monthly average daily discharge flow limitation of 1.4.

The proposed Order would set an Effluent Limitation on BOD loading of 100 lbs/acre/day, seasonally and over any particular discharge cycle. Given the estimated flow rate of 1.4 mgd and an average BOD concentration of 247 mg/L, the Discharger indicates the maximum BOD loading rate for any day is 13 lbs/acre/day with an average BOD loading rate of 8 lbs/acre/day.

To provide for even distribution of wastewater to the Use Area, the proposed Order requires wastewater to be blended with fresh water at a ratio of 1:1, and applied using the center pivot irrigation system.

The proposed WDRs would prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedance of these objectives or natural background water quality, whichever is greatest.

Monitoring Requirements

Section 13267 of the CWC authorizes the Regional Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

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The proposed Order includes effluent monitoring requirements, Use Area monitoring, and water supply monitoring. The monitoring is necessary to evaluate the extent of the potential degradation from the discharge.

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The proposed Order would set limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.

JSP 12/26/07

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